

REMARKS/ARGUMENTS

Reconsideration and withdrawal of the rejections of the application are respectfully requested in view of the amendments and remarks herewith, which place the application into condition for allowance. The present amendment is being made to facilitate prosecution of the application.

I. STATUS OF THE CLAIMS AND FORMAL MATTERS

Claims 1, and 5-9 are currently pending. Claims 1, 8 and 9 are independent and are hereby amended. No new matter has been introduced. Support for this amendment is provided throughout the Specification as originally filed.

Changes to the claims are not made for the purpose of patentability within the meaning of 35 U.S.C. §101, §102, §103, or §112. Rather, these changes are made simply for clarification and to round out the scope of protection to which Applicants are entitled.

II. REJECTIONS UNDER 35 U.S.C. §101

Claims 1, 5-7, and 9 were rejected under 35 U.S.C. §101 as allegedly directed to non-statutory subject matter.

Claim 9:

Claim 9 has been amended as suggested in the Office Action to overcome the §101 rejection.

Claims 1 and 5-7:

Applicants provide an amendment and an argument to overcome the §101 rejection of those claims.

First, claim 1 has been amended to recite, “input means to receive the input speech.” The recited input means has support throughout the as-filed specification and, for example and not limitation, Publ. App. pars. [0084], [0141] and FIGS. 1, 2

Second, claim 1 is in “mean-plus-function” (MPF) format under 35 U.S.C. §112, sixth paragraph. As such, claims 1, and 5-7 necessarily are not software but recite structural elements and are, therefore, statutory.

Claim 1 meets the 3-prong test of MPEP §2181 for being written in “means-plus-function” format thereby invoking interpretation of the claim limitations under 35 U.S.C. §112, sixth paragraph.

“A claim limitation will be presumed to invoke 35 U.S.C. 112, sixth paragraph, if it meets the following 3-prong analysis:

(A) the claim limitations must use the phrase “means for” or “step for;”

(B) the “means for” or “step for” must be modified by functional language; and

(C) the phrase “means for” or “step for” must not be modified by sufficient structure, material, or acts for achieving the specified function.”

“Means-plus-function” claims are, by definition, hardware and get their structure from the specification.

From MPEP 2111.01:

When an element is claimed using language falling under the scope of 35 U.S.C. 112, 6th paragraph (often broadly referred to as means or step plus function language), the specification must be consulted to determine **the structure, material, or acts** corresponding to the function recited in the claim. (emphasis added)

Also, MPEP 2106 states:

Where means plus function language is used to define the characteristics of a machine or manufacture invention, such language must be interpreted to read on only the **structures or materials disclosed in the specification** and “equivalents thereof” that correspond to the recited function. (emphasis added)

For either of the above reasons, independent claim 1 and dependent claims 5-7 are believed to recite statutory subject matter.

III. SUPPORT FOR AMENDMENTS

Support for the amendments to claims 1, 8, and 9 is found in the as-published application par. [0144].

IV. REJECTIONS UNDER 35 U.S.C. §103

Claims 1 and 7-9 were rejected under 35 U.S.C. §103(a) as allegedly unpatentable over U.S. Patent No. 5,218,668 to Higgins et al. (“Higgins”) in view of Doyle (*“Progressive Word Hypothesis Reduction for Very Large Vocabulary Continuous Speech Recognition,”* 1997), and further in view of U.S. Patent Number 4,882,757 to Fisher et al. (“Fisher”); and

Claims 5 and 6 were rejected under 35 U.S.C. §103 as allegedly unpatentable over Higgins, Doyle, Fisher and further in view of U.S. Patent No. 5,960,447 to Holt et al. (“Holt”).

Applicants respectfully traverse these rejections.

Independent claim 1 is representative and recites, *inter alia*:

“selection means for selecting one or more candidate first words from the plurality of input words to be processed by speech recognition processing, based on the concatenation information, and a word score that represents an evaluation of acoustic scores and language scores calculated using said characteristic values, and for selecting one or more candidate second words from the plurality of input words not based on the acoustic score, the candidate second words having unstable acoustic characteristic values with a number of phonemes and syllables less than a preset value, wherein the selection means selects said candidate second words likely to be concatenated linguistically to a directly previously recognized word and to subject the concatenated candidate first and candidate second words to the matching processing;” emphasis added)

The present device performs preliminary word selection of selecting one or more words, processed for matching, using the characteristic values stored in the characteristic value storage unit, based on the word concatenation information. The word concatenation information is defined in the specification (and in the claims) as, “the relation (concatenation or union) of component words of the word sequence representing the ultimate result of speech recognition, and includes the acoustic score and the language score of each word as well as time points of the beginning end and terminal end of the speech portions associated with the respective words.”

Words obtained as a result of the pre-selection word selection, are matched using the characteristic information referencing the word concatenation information. Publ. App. pars. [0053]-[0057].

Moreover, as disclosed in the specification and as claimed in claim 1:

“... word pre-selection unit 13 selects a word from the group of words registered in the dictionary database 18A, based on the word score calculated using characteristic values, while also selecting words having a short duration of enunciation, based on a measure, words likely to be concatenated linguistically to the directly previously recognized word or words included in the past result of speech recognition, to subject the so-selected words to

the matching processing. So, the failure in the selection of a pre-set word may be prohibited from occurrence in the preliminary word selection processing, without it being necessary to use an acoustic model. The result is that deterioration in the precision in speech recognition may be prevented from occurring as the necessary resource is prevented from increasing as far as possible.”

Claim 1 is believed patentable over Higgins, Doyle, Holt, and Fisher because those references taken alone or in combination do not teach, suggest, or render predictable each and every element recited in the claim.

For reasons similar or somewhat similar to those described above with regard to independent claim 1, independent claims 8 and 9 are also believed to be patentable.

V. DEPENDENT CLAIMS

The other claims are dependent from one of the claims discussed above and are therefore believed patentable for at least the same reasons. Because each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

CONCLUSION

Claims 1 and 5-9 are in condition for allowance. In the event the Examiner disagrees with any of statements appearing above with respect to the disclosure in the cited reference, or references, it is respectfully requested that the Examiner specifically indicate those portions of the reference, or references, providing the basis for a contrary view.

Please charge any additional fees that may be needed, and credit any overpayment, to our Deposit Account No. 50-0320.

In view of the foregoing amendments and remarks, it is believed that all of the claims in this application are patentable and Applicants respectfully request early passage to issue of the present application.

Respectfully submitted,

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